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- USSR: Astrakhan Natural Gas Project

- I. The Soviets in recent months have put development of the Astrakhan natural gas project on a fast track.
 - A. This project is scheduled to produce 3 billion cubic meters of gas a year by 1985 and probably could produce 30 to 60 billion cubic meters when development is completed around 1990--equal to about 10 percent of current Soviet gas output.
 - B. Negotiations with potential Western suppliers for some \$1.5 billion in pipe and equipment needed to develop the gas fields have intensified sharply since the summer of 1982; the Soviets hope to conclude most, if not all, of the contracts by early 1983.
 - C. The project was included in early versions of the 1981-85 economic plan and contracts were actively discussed with Western firms beginning in the late 1970s. It was put on a back burner, and apparently removed from the five year plan, in 1981 because of Moscow's concentration on the Yamal pipeline. With the Yamal project well in hand, the Astrakhan project was moved back into the plan and apparently now has top priority with Moscow among cooperative energy projects with West European firms.
 - D. The Western countries involved in bidding on the project, especially France and Canada, are trying to find ways around the OECD consensus interest rate, mainly on the grounds that contract discussions started several year ago.
- II. Soviet geologists estimate that the Astrakhan fields--which are located north of the Caspian Sea in the Southern USSR (see map)--may contain up to 6 trillion cubic meters of gas, making it nearly as large as Urengoy.
 - A. Development of these gas reservoirs will be extremely difficult, however, since nearly 37 percent of the gas consists of noncombustible contaminants--about 25 percent hydrogen sulfide (H₂S) and 12 percent carbon dioxide (CO₂)--which are highly corrosive and hazardous to handle.
 - B. Moreover, the gas reservoirs are located at depths of more than 4,100 meters--twice as deep as those at

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Urengoy--with reservoir pressures of 630 atmospheres (9,300 psi) and temperatures of up to 150 degrees centigrade.

- III. The Astrakhan project is important to the USSR as a source not only of fuel but also of sulfur and other raw materials needed for expanding phosphate fertilizer and petrochemical production.
- A. Moscow wants to use Astrakhan natural gas to compensate for depleted gas-producing capacity at the vast Orenburg field and for replacement of output from North Caucasus gas reserves and output, which are nearing exhaustion.
 - B. Although intended primarily to meet domestic gas requirements, the Astrakhan fields could help to maintain Soviet gas exports to both Eastern and Western Europe via the Orenburg pipeline.
 - C. The Astrakhan project also includes ambitious plans for sulfur plants with a total capacity of about 3 million tons a year.
 - D. Although the USSR produces in excess of 11 million tons a year, second only to the United States, sulfur is in tight supply in the USSR.
 - E. Poland--which at one time provided about 7 percent of Soviet sulfur consumption--can no longer be counted on for sizeable deliveries; thus, the USSR has had to turn to Western countries to help meet its domestic needs.
 - F. In addition, the carbon dioxide removed from the gas will be transported via a 630-kilometer pipeline for injection into the Gur'yev oil fields to enhance oil recovery.
- IV. The Soviets will require Western equipment and technology to drill and equip the wells, construct gathering lines, and build gas-processing and refining plants.
- A. The hard currency cost is expected to be about \$1.5 billion, of which as much as \$650 million may be needed for special corrosion-resistant seamless tubular steel and large diameter pipe.
 - B. Future maintenance of the large gas complex also will require the procurement of Western equipment and technology.
- V. Negotiations for Western equipment which began in 1977 and had proceeded in a desultory fashion, have greatly picked up since the summer of 1982, when Moscow stationed a negotiating team in Cologne.

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- B. The Soviets have stipulated that US equipment is to be purchased only if it is unavailable elsewhere.
- C. The Soviets say they want to sign some contracts before the end of 1982 and wrap up the remainder by the end of 1983. Such a pace would be unprecedented, but Moscow clearly is moving rapidly. Deliveries of Japanese pipe for the Astrakhan project reportedly have begun.

VI. The Soviets are pressing hard to obtain concessionary Western loans to finance imports of machinery and equipment for the project.

- A. Not surprisingly, Moscow is insisting on below market rates--specifically, they want to pay no more than the 7.8 percent rate obtained on Western government-guaranteed credits for the Yamal pipeline.
- B. This rate is far below the OECD consensus rate of 12.4 percent and is even below the lowest recent non-subsidized rate on Western contracts with the USSR--a rate of 8.7 percent in terms of yen on Japanese pipe sales.
- C. The Soviet tactics are having an effect: in an effort to win contracts, Canada and France reportedly are considering "grandfathering" the rate to 1981 or earlier, on the grounds that negotiations were well along at that time.

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